Utah Department of Transportation
Environmental Assessment
Template

January 2006

Introduction to Environmental Assessment Template

This annotated template is intended to be used by Utah Department of Transportation (UDOT) staff and consultants when preparing or reviewing National Environmental Policy Act (NEPA) Environmental Assessments (EAs) for UDOT projects. It is presented in the form of a working EA outline or template and therefore has the physical appearance of an actual NEPA EA.

Text appearing in Arial font text boxes under specific headings in this document is example text that can be used in almost any NEPA EA, with minor project-specific modifications. The example text should be reviewed for needed modifications for each EA document.

The EA Guidance document is the companion document to this EA Template. It includes more detailed instructions for authors, editors, reviewers and technical analysts to follow to ensure that all UDOT EAs meet Federal Highway Administration (FHWA) NEPA requirements and adequately support the determination or findings.

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Sample Cover Sheet

Interstate 215 Widening Project
From I-15 to Redwood Road

Davis County, UTAH

Environmental Assessment ([*Note: include the following text if applicable*] and Section 4(f) Evaluation)

Submitted Pursuant to: 42 USC 4332(2)(C)

(NOTE: If there is a Section 4(f) Evaluation, include "and 49 U.S.C. 303")

U.S. Department of Transportation
Federal Highway Administration
and
Utah Department of Transportation

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Sample Introduction

General Information About This Document

What's in this document?

The Utah Department of Transportation (UDOT) and the Federal Highway Administration (FHWA) have prepared this Environmental Assessment (EA), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Davis County, Utah. This EA describes the following:

- Why the project is being proposed
- Alternatives for the project
- Existing environment that could be affected by the project
- Potential impacts from each of the alternatives
- Proposed avoidance, minimization and/or mitigation measures.

What should you do?

- Please read this Environmental Assessment. Additional copies of this document as well as the supporting technical studies are available for review at the district office located at (give address) and/or XYZ public institution, such as a library, community center, school, etc. (include addresses)
- If possible, please attend the public hearing (if applicable) to be held (provide date, time and location).
- We welcome your comments. If you have any questions or concerns regarding the proposed project, please send us written comments by (add date). Options for submitting comments include:
- Via postal mail addressed to: (insert address)
- Via email addressed to: (insert email address)

Please note that the deadline for receiving comments on this document is: (insert end date for comments).

What happens next?

After comments are received from the public and reviewing agencies, the comments will be reviewed and considered. After which UDOT and FHWA may:

1. Conduct additional environmental studies
2. Give environmental approval to the proposed project
3. Discontinue the project.

If the project is given environmental approval and funding is appropriated, UDOT could design and construct all or part of the project.

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Sample Title Sheet

(Insert short descriptive phrase consistent with project alternative(s) such as “widen” or “improve” or “rehabilitate.”)
Interstate 80, from Wasatch Road KP 0.0 (postmile 0.0) to KP 16.9 (postmile 10.5) just south of Sandy city limits

ENVIRONMENTAL ASSESSMENT
([*Note: include the following text if applicable*] and Section 4(f) Evaluation)

Submitted Pursuant to: 42 USC 4332(2)(C)
(NOTE: If there is a Section 4(f) Evaluation, include “and 49 U.S.C. 303”)

U.S. Department of Transportation
Federal Highway Administration, and
Utah Department of Transportation

The following persons may be contacted for additional information concerning this document:

Name (FHWA Project Manager)
Title
FHWA Utah Division
2520 West 4700 South, Suite 9A
Salt Lake City, UT 84118
Telephone (801) 963-0182

Name (UDOT Project Manager)
Title
UDOT Region Office
Street Address
City, UT, Zip
Telephone (XXX) XXX-XXXX

(Note: The above text is typically centered on the page and is the only text on the title sheet.)

Summary

When preparing a summary, include a table or matrix with impacts (and avoidance, minimization and/or mitigation measures, if not too cumbersome) to assist the reader in evaluating the potential impacts of the project. When multiple alternatives are carried forward in the EA with no preferred project being designated, the summary should present information for each alternative. If the EA assesses a proposed project with design options, differences among the design options should be highlighted in the summary. Samples of two tables that can be modified to fit the project follow. Consider printing the Summary on non-white paper to clearly differentiate it from other sections of the EA.

Include a summary of the following information:

- Proposed action;
- Major actions proposed by governmental agencies in the same area;
- Alternatives, including alternatives considered but eliminated;
- Areas of controversy or unresolved issues;
- List of actions required for the proposed action;
- Table or matrix of environmental impacts;
- List of mitigation measures if not included in table; and
- Graphics, if appropriate.

Table 1 is a sample of a summary table that may be used for a project with a preferred project designated.

Table 1. Summary of Environmental Impacts for I-215 Widening Project

Impact Category	Acres	Avoidance, Minimization and/or Mitigation Measures
Wetlands Affected		
Filled	xx	xx
Indirectly Affected	xx	xx
Relocations		
Residences	xx	xx
Businesses	xx	xx
Farmsteads	xx	xx
Noise (Receptors Affected)	xx	xx
Archaeological Resources	xx	xx
Historic Resources	xx	xx
Section 4(f)/6(f) Impact Area		
4(f) Area	xx	xx
Farmland Lost		
Prime	xx	xx
State-important	xx	xx
Note:		

Table 2 is a sample that may be used for a project with multiple alternatives or design options.

Table 2. Summary of Environmental Impacts by Alternative

Impact Category	Alternative				
	A	B	C	D	E
Wetlands Affected, acres					
Filled	xx	xx	xx	xx	xx
Indirectly Affected	xx	xx	xx	xx	xx
Relocations					
Residences	xx	xx	xx	xx	xx
Businesses	xx	xx	xx	xx	xx
Farmsteads	xx	xx	xx	xx	xx
Noise (Receptors Affected)	xx	xx	xx	xx	xx
Archaeological Resources	xx	xx	xx	xx	xx
Historic Resources	xx	xx	xx	xx	xx
Section 4(f)/6(f) Impact Area					
4(f) Area	xx	xx	xx	xx	xx
Farmland Lost					
Prime	xx	xx	xx	xx	xx
State-important	xx	xx	xx	xx	xx
Note:					

Table of Contents

Generate a typical table of contents based on the sections and subsection headings shown in this template that generally follow the basic EA outline shown below. Insert the page number for each section and subsection on the right hand side of the page.

Chapter 1
Purpose and Need

Proposed Action

Begin the Purpose and Need section with a brief summary description of the proposed project, including a general description of the geographic setting. Include a project location map, project vicinity map and/or project features map that clearly identify the limits of the project and the project footprint. The project location map should identify street names and prominent landmarks (i.e., community center, museum, library), especially those mentioned in the text. Include a brief description of the existing facility and briefly summarize important background information on the project including proposed funding and consistency with the Federal Statewide Transportation Improvement Program and any applicable long-range transportation plans. Example text is shown below:

Example Text:

The Utah Department of Transportation (UDOT) and the Federal Highway Administration (FHWA) propose to widen a segment of I-215 between I-215/I-15 junction and Redwood Road in Davis County. The total length of the project is 3.4 km (2.1 miles). The existing 2-lane roadway in this area experiences extreme congestion during peak commute periods and is a high accident location. The proposed improvements include adding two general-purpose lanes in each direction between the I-215/I-15 junction and Redwood Road. A new westbound I-215 to northbound Redwood Road flyover ramp is included as part of the proposal. Figures 1 and 2 show project location and vicinity maps.

This project is included in Utah's FY 2000/2004 Federal Statewide Transportation Improvement Program (STIP) and is proposed for funding from the Transportation Equity Act for the 21st Century (TEA-21). It is also included in the Wasatch Front Regional Council's (WFRC) 1999 Long Range Transportation Plan, 1998–2020 for the Wasatch Front Urban Area.

Purpose of the Project

The project "purpose" is a set of specific objectives of the proposed action. The project purpose is used as the decision factor for comparing alternatives and selecting the preferred alternative. The purpose is a proposed solution to the problem or deficiency identified in the need statement. The purpose should be:

- Consistent with transportation goals and objectives (mobility, safety, capacity).
- Reasonable expenditure of public funds (benefit: cost).
- Broad enough to allow a reasonable range of alternatives.
- Achievable and unbiased.

Each purpose statement may include several objectives and be a bulleted list and should be no more than two sentences, as shown in the following example:

Example Text:

- Provide congestion relief in order to improve traffic flow on the regional transportation system.
- Improve the safety and operation of the I-215 mainline and on-ramps and off-ramps in the vicinity of Redwood Road.
- Help achieve the goals of the Wasatch Front Urban Area Long Range Transportation Plan, 1998-2020.
- Provide a balanced circulation system and reduce out-of-direction travel.

Need for the Project

The Need is the transportation problem or deficiency that UDOT and FHWA are responding to. It should be quantified to the extent possible. The statement of need, together with the purpose, allows the agency to focus the range of alternatives. When developing the statement of need, consider this: alternatives can be thought of as different ways to meet the underlying need. Discuss as appropriate for the proposed project the following categories of need.

Capacity, Transportation Demand, and Safety

- Describe existing capacity and level of service
- List regional population/traffic forecasts
- Identify projected capacity needs, queue and delay, and/or level of service
- Identify system safety needs
- Describe existing accident rate
- Describe the projected accident rate without project
- Compare the existing and projected accident rates without the project to the statewide average for a comparable facility
- Explain what is needed to improve safety

Roadway Deficiencies

- Describe operational deficiencies (substandard geometrics, inadequate cross sections)
- Identify structural limitations (load limits)
- Discuss maintenance problems
- Explain what is needed to correct deficiencies

Social Demands or Economic Development

- Discuss existing land use plans
- Identify projected land use plan changes
- Identify growth management/control ordinances

Legislation

- Describe any federal, state or local government mandates (e.g., demonstration projects, sales tax measure projects)

Modal Interrelationships and System Linkages

- Discuss project interface with airport, rail, port and mass transit facilities
- Indicate whether the project is a connecting link
- Describe how the project fits into the transportation system

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Chapter 2
Alternatives

This chapter of the EA should include a general description of the alternatives currently under consideration, and a description of the alternatives that have been considered but were eliminated from further consideration. Be sure to describe the methodology and criteria used to develop and evaluate alternatives.

Proposed Action

This section should include a brief restatement of the proposed action and the purpose and need for the project. Include a map or maps showing the details of the proposed build alternative(s). Other graphics such as typical cross sections and typical profiles should also be included, especially when needed to illustrate variations in the alternatives. If the proposed action includes more than one build alternative, consider adding a brief introductory paragraph similar to the example shown below:

Example Text:

This section of the EA describes the proposed action and the design alternatives that were developed to achieve the project purpose and need while avoiding or minimizing environmental impacts. The alternatives are Alternative "X," Alternative "Y," and the No-Build Alternative.

Independent Utility and Logical Termini

Depending on the type of project being proposed, consider adding a section describing how the project is consistent with the "independent utility and logical termini" requirements of FHWA. Federal law (23 CFR 771.111(f)) requires that each proposed transportation project that is evaluated in a NEPA document meet the following criteria:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope. In other words, provide assurance that the project limits have not been foreshortened from a more productive segment length just to avoid underreporting an environmental impact that will be unavoidable in a future phase.

- Have independent utility or independent significance (be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made)
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements. In other words, don't foreclose future potential for adding HOV lanes, bicycle lanes, widening in the median, bus pullouts, accommodating transit vehicles (e.g., bus or rail).

Alternative(s) Considered but Eliminated from Further Consideration

This is the section of the EA where the range of alternatives that were considered by the project proponent and the reasons those alternatives are not being carried forward into the EA should be described. Consider using the criteria and findings of the pre-NEPA alternative evaluation as the basis of this section. Include maps or other graphics if appropriate.

Proposed Build Alternative(s)

Clearly describe the major project features of the build alternative(s) in this section of the EA. Include a map or maps showing the location and major features of the proposed action. Make sure to label all locations referenced in the text. The following text is an example of how you might describe the build alternatives in this section of the EA:

Example Text:

The proposed project is located in Davis County on I-215 between I-15 and Redwood Road. The project covers a distance of approximately 3.4 km (2.1 miles). Within the limits of the proposed project, I-215 is a conventional two-lane divided highway with two 12 feet lanes, and 2 to 4 feet non-standard shoulders. The purpose of the project is to construct two additional general-purpose lanes in each direction between the I-215/I-15 junction and Redwood Road. A new westbound I-215 to northbound Redwood Road flyover ramp would be included as part of the proposal. The upgrade will improve safety and correct operational problems caused by heavy peak-hour traffic congestion. Related actions include relocating a one-mile segment of an existing 230 kV transmission line and use of two undeveloped parcels as temporary construction staging areas.

No-Build Alternative

The No-Build Alternative provides a baseline for comparing impacts with the other alternatives. Planned and programmed transportation improvements obtained from local public works departments, transit agencies, UDOT District Offices, and regional transportation planning agencies are included in the No Build Alternative. Carefully explain the effects of the No-Build Alternative. For example, adverse effects related to the No-Build Alternative might be an inability to meet the stated purpose and need for the project, increased congestion, worsened air quality, and ever

increasing operation and maintenance costs. The No-Build Alternative may also result in greater environmental impacts if several smaller fixes would need to be implemented over a longer period of time rather than a one-time larger fix.

TSM/TDM Alternative

The TSM/TDM alternative includes a range of activities that would maximize the efficiency of the existing transportation system. TSM strategies are aimed at increasing the number of vehicle trips a facility can carry without increasing the number of through lanes. Examples include: ramp metering, high-occupancy vehicle (HOV) lanes, turning lanes, reversible lanes and traffic signal coordination. TSM strategies also encourage non-automobile transportation modes, such as walking, bicycling, rail, and transit.

TDM focus on regional strategies for reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle occupancy. TDM attempts to encourage higher vehicle occupancy or reduced traffic congestion by expanding the traveler's transportation choices in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience. Be sure to consult with the long-range regional transportation planning authority in your area when defining the TSM/TDM alternative.

Preferred Alternative

If a Preferred Alternative has been identified at the "draft" EA stage, it must be disclosed (see suggested wording below). If this is the case, be sure to explain why UDOT/FHWA identified that alternative as the Preferred Alternative. The following text should be used as introductory language for the Preferred Alternative section of a draft EA:

Example Text:

After comparing and weighing the benefits and impacts of all of the feasible alternatives, some of which are summarized in the summary table, the project development team has identified Alternative "X" as the Preferred Alternative, subject to public review. Changes to the Preferred Alternative may occur subsequent to the public review and comment period.

Include any statements made by local governments or organizations indicating they prefer a particular alternative and describe any opposition to the project or it's alternatives.

Future Transportation Conditions

This is where future traffic conditions, with and without the proposed project, should be described. Using information from the Transportation Technical Report, summarize the performance of each alternative (including No Build and TSM/TDM alternatives) using standard operational metrics, such as travel time, screen line volumes, level of service, queue lengths, accident frequency, mode split, etc.

Related Actions

If there are related actions to the proposed action, such as other transportation improvements or a planned development, they should be disclosed in this section.

Chapter 3
Affected Environment, Environmental Consequences, And Avoidance, Minimization And/Or Mitigation Measures

This chapter evaluates and provides detailed information for describing and analyzing each of the resource topics in the EA. It includes evaluations and detailed information, as appropriate on the *Regulatory Setting, Studies and Coordination, Affected Environment, Impacts, and Avoidance, Minimization and/or Mitigation.*

It is important in this chapter to list all permits and approvals that will be needed, including water and wetland permits, threatened and endangered species approvals (biological opinions, determinations), freeway agreements, etc. Also, give the status of each approval.

Table 3 is an example that may be used to display this information:

Table 3. Required Permits and Approvals

Agency	Permit/Approval	Status
United States Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species Review and Comment on 404 Permit	Non-jeopardy Biological Opinion issued on February 26, 1999. USFWS has actively participated in NEPA process.
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States.	Concurrence on the LEDPA as part of NEPA received on March 10, 1999. Application for Section 404 permit anticipated after final EA distribution.
Add others as needed		

The EA should include a full text discussion only for those topics that are directly relevant to the project. For those topics considered, but determined not to be relevant for the project, include the following summary statement:

> *Example Text:*
>
> As part of the scoping and environmental analysis conducted for the project, the following environmental resources were considered but the project will have no impact on these resources. Consequently, there is no further discussion regarding these resources in this document.

List topics and briefly describe why the project will not impact the resources (in one or two sentences per topic). Cite technical studies as appropriate.

Example Text:

Wild and Scenic Rivers: Consultation with the Department of the Interior conducted July XX, 20XX included review of designated wild and scenic rivers, none of which are located within the project area.

Farmland: Consultation with the Natural Resource Conservation Service on August XX, 20XX indicated there are no prime or unique farmlands located in the project area.

If a given topic is relevant, the discussion of that topic should include the following subheadings:

- Regulatory Setting (as appropriate)
- Studies and Coordination (as appropriate, or combined with Regulatory Setting)
- Affected Environment
- Impacts (permanent, temporary [construction related], direct and indirect)
- Avoidance, Minimization and/or Mitigation Measures

Land Use

Regulatory Setting, Studies and Coordination

Include reviews of city and county land use plans, arterial street plans, land use general plan designations and zoning codes, comprehensive plans, regional transportation plans, and neighborhood plans.

Affected Environment

Address federal, state, regional and local plans for zoning, land use, recreational and transportation plans, including the following:

- Map showing existing land use for the project area and the surrounding area influenced by the project
- Map showing existing zoning
- Applicable Land Use Plans and Development Trends
- Federal Plans or Policies
- State Plans
- Regional Planning Agency Development and Transportation Plans
- County and City Plans
- Land Use
- Recreation Area and Open Space Plans

- Zoning Plans

Impacts

Assess possible land use changes associated with increased accessibility.

- Distribution of development among governing agencies and impact on their public services
- Distribution of development between cities and suburbs
- Amount and type of land required
- Existing zoning and current use of real property to be acquired for right of way
- Potential for joint or multiple use of right-of-way for utilities or other purposes
- Land use changes caused by changes in noise, air, water and visual quality
- Possible conflicts between proposed action and Native American land or other land use plans, policies and controls. If there is a conflict, describe the extent to which the proposed action will be reconciled with these plans and or reasons for proceeding without full reconciliation
- Consistency with adopted transportation and development plans for the area and region
- Potential changes in the timing, rate, location, or amount of growth, as a result of implementing the project.

Avoidance, Minimization and/or Mitigation Measures

Include mitigation measures and commitments to offset adverse impacts (e.g. access changes or controls). Mitigation measures considered or available but not included and why. Refer to the EA guidance for potential mitigation measures.

Farmland

Regulatory Setting

Describe the federal, state and local regulations that govern the use, conversion and protection of farmland.

Studies and Coordination

Include results of coordination with Natural Resources Conservation Service (NRCS) and state and local agencies as appropriate.

Complete and submit to NRCS office:

- Farmland Conversion Impact Rating (Form AD-1006) Part 1 and Part 3

- Vicinity map
- Description of any alternatives considered
- Soil Survey Area number.
- Include copy of completed AD-1006 returned by NRCS in an appendix to the EA. Retain Part D for files.

- Affected Environment
- Current Agricultural Production
- Prime Farmland
- Unique Farmland
- Farmland of Statewide Importance
- Agriculture Protection Areas
- Other Farmland of Local Importance

Impacts

- Total Farmland Conversion
- Prime Farmland Conversion
- Unique Farmland Conversion
- Conversion of Farmland of Statewide Importance
- Agriculture Protection Areas Conversion
- Conversion of Other Farmland of Local Importance

Avoidance, Minimization and/or Mitigation Measures

Identify mitigation measures and commitments to offset adverse impacts. Refer to the EA guidance for potential mitigation measures.

Social Impacts

The Social Impact section may be broken into the following subsections:

- Community Character and Community Cohesion
- Relocations
- Public Facilities, Services and Utilities
- Recreation Resources
- Environmental Justice Populations

Discuss each as a separate unit—include regulatory setting (as appropriate), studies and coordination (as appropriate), affected environment, impacts and avoidance,

minimization and/or mitigation measures in one subsection, and then move on to the next subsection and do the same thing. List applicable technical reports along with their completion dates.

Community Character and Community Cohesion

Regulatory Setting, Studies and Coordination

Consult individual county and city zoning and planning departments that may be affected by proposed project to learn of the specific requirements of each locale. Provide a summary description of all applicable local regulations.

Affected Environment

- Define community boundaries and neighborhood or subdivision boundaries.
- Identify businesses, homes, neighborhoods and activity centers that may be affected
- Determine demographic characteristics (e.g., Title VI residents [elderly, handicapped, or minority], transit dependent, large family, income level, owner/tenant status)
- Identify travel patterns, accessibility and linkages with community facilities such as churches, schools and community centers (i.e. no physical barriers to inhibit pedestrian movement, existing streets with sidewalks, regular transit service, etc.).

Impacts

- Cutting off streets
- Separating adjoining residential areas
- Isolating neighborhoods
- Creating barriers between homes and community facilities
- Induced growth or changes in neighborhood character
- Reduced quality of life
- Increased urbanization or isolation

Avoidance, Minimization and/or Mitigation Measures

- Identify mitigation measures and commitments to offset adverse impacts.

Relocations

Regulatory Setting

Summarize UDOT's Relocation Assistance Program (RAP), which is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended).

Studies and Coordination

Consider census data, social/economic reports, contact with community leaders and local officials, and field surveys.

Affected Environment

- Describe socio-economic characteristics of affected area
- Identify owner-tenant status and specify whether area is in transition
- Identify the numbers, types and sizes of residential households and businesses in the project area.
- Describe products and services provided by businesses.

Impacts

- Estimate number of households to be displaced
- Identify dwelling type, occupancy status and resident characteristics
- Estimate number, types and sizes of businesses, farms and non-profit organizations to be displaced
- Identify approximate number of employees at each business, farm and non-profit organization.

Avoidance, Minimization and/or Mitigation Measures

- Describe available replacement housing
- Describe any special relocation services to be provided
- Include a statement that UDOT's Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and that all relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 U.S.C. 2000d, et seq.).
- Include a statement of commitment to last resort housing when sufficient comparable replacement housing may not be available.

Public Facilities, Services and Utilities

Regulatory Setting, Studies and Coordination

Describe the regulatory setting as it relates to title 23 of the United States Code and the Code of Federal Regulations.

Affected Environment

- Identify existing educational facilities, religious institutions, social institutions, medical facilities, governmental institutions
- Identify law enforcement, fire, and other emergency services that could be affected by the project
- Identify public services and utilities that could be affected by the project, including water, sewer, electric power, telecommunication systems, transmission lines, pump stations, and other infrastructure

Impacts

- Changes in travel times or access
- Temporary and long-term impacts to utilities and emergency services
- Impacts caused by detours and roadway closures
- Positive impacts, such as improved access for emergency services

Avoidance, Minimization and/or Mitigation Measures

Identify mitigation measures and commitments to offset adverse impacts.

Recreation Resources

Regulatory Setting, Studies and Coordination

Describe the regulatory setting as it relates to Section 4(f) and Section 6(f), if appropriate. Include the resources in this section of the EA, but refer the reader to the Section 4(f) Evaluation for detailed information, if applicable. If there are no resources eligible for protection under Section 4(f) or Section 6(f), include such a statement in this section of the EA.

Affected Environment

- Identify and describe any parks and recreation facilities within the project vicinity, including equestrian trails, recreation bikeways, and other recreation trails
- Determine ownership and past or present funding sources.

- Describe use and number of users by activity
- Briefly identify and describe Section 4(f) and/or if Section 6(f) recreation resources in the project study area.

Impacts

- Discuss how the proposed project (each alternative) would impact the facilities
- Consider impacts on access, capacity, aesthetics, air quality, noise, water quality and land use in the vicinity.
- If the proposed project would use a Section 4(f) or Section 6(f) resource, refer the reader to the "Section 4(f) Evaluation" portion of the document for detailed information on impacts to those resources.

Avoidance, Minimization and/or Mitigation Measures

Identify mitigation measures and commitments to offset adverse impacts.

Environmental Justice Populations

Regulatory Setting

Summarize the regulatory setting as it relates to Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations and The Federal-aid Highway Act of 1970: 23 United States Code 109(h).

Studies and Coordination

Include a definition of Environmental Justice (EJ) populations, which are the subject of the EJ analysis: percentage of low-income and minority populations present within impacts census blocks, block groups or tracts. Include a description of enhanced public outreach efforts to EJ populations and analysis of impact/avoidance of disproportionate impact.

Affected Environment

- Define the area of potential impact
- Document data sources including census data, data from public involvement, local comprehensive plans, windshield surveys
- Describe population and income characteristics of the study area
- Document the presence of low income or minority populations

Impacts

- Provide analysis of effects of each alternative including the No Build Alternative on EJ populations
- Document community perception of impacts, positive and negative and severity
- Describe any offsetting benefits
- Describe if any adverse effects are appreciably more severe or greater in magnitude than the adverse effects that will be suffered by the non-minority /low income population

Avoidance, Minimization and/or Mitigation Measures

- Discuss any alternatives that avoid impacts to EJ populations including their practicability.
- Provide definition of disproportionately high and adverse effects
- Describe any disproportionately high or adverse effects on low income or minority populations remain after avoidance and mitigation measures have been proposed.
- Describe efforts to avoid, mitigate, enhance or offset project impacts as they pertain to EJ populations.
- Identify mitigation commitments and the community perception of suitability of proposed mitigation.
- If no low-income or minority populations have been identified, summarize all of the efforts undertaken to identify such populations and conclude the section with the following language:

Example Text:

No minority or low-income populations have been identified that would be subjected to disproportionately high and adverse effects by the proposed project as determined above.

Economics

Regulatory Setting

Describe the regulatory setting as it applies to 23 U.S.C. 109(h) and the CEQ regulation 40 C.F.R. 1508.14.

Studies and Coordination

Consider field interviews with business owners and managers, local government officials, business leaders, assessor's records, and economic development plans.

Affected Environment

- Describe general economic climate
- Identify centers of employment
- Describe types of commerce
- Describe property values and tax base

Impacts

- Consider effects on overall business activity
- Consider increase, decrease or change in location in permanent jobs
- Estimate effects on property value trends and the local economy
- Assess regional economic impacts
- Identify short term economic benefits resulting from construction expenditures and construction employment

Avoidance, Minimization and/or Mitigation Measures

Identify mitigation measures and commitments to offset adverse impacts.

Pedestrian and Bicyclist Considerations

Regulatory Setting, Studies and Coordination

Summarize the regulatory setting as it applies to federal regulatory considerations (FHWA, ADA). Describe the local regulatory setting as it applies to local Metropolitan Planning Organizations (MPOs).

Affected Environment

- Describe existing and planned facilities
- Summarize any local bicycle master plans addressing the project area
- Determine if local land use/recreation plans include bike/pedestrian facilities
- Consider existing travel times, capacity, circulation, and congestion on existing facilities
- Assess current levels of safety

Impacts

- Describe use projections and capacity

- Describe changes in safety, circulation, access and travel time

Avoidance, Minimization and/or Mitigation Measures

- Discuss any measures to avoid or reduce adverse impacts on the facility and its users.
- Include the following two paragraphs if the project proposes or has impacts on pedestrian or bicycle facilities (see example text below)

Example Text:

FHWA directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal aid highway projects (see Title 23 U.S. Code Section 217).

Example Text:

UDOT and FHWA are committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

Air Quality

Regulatory Setting, Studies and Coordination

Describe the regulatory setting as it relates to the Clean Air Act (42 U.S.C.§§ 7401-7671q) as amended in 1990. Summarize coordination with the federal and state agencies.

Affected Environment

Provide a description of the following:

- General climatic and meteorological conditions in the study area
- Air quality concerns in the project area
- Summary of project related pollutants
- Pollutants evaluated
- Potential Mesoscale Air Quality Impacts
- Potential Microscale Air Quality Impacts
- Regional Air Quality Conformity

The wording of the Regional Air Quality Conformity statement must be as follows:

Example Text:

The (insert title and year) Regional Transportation Plan (include amendment number if applicable) was found to conform by (insert metropolitan planning organization on (insert date) DATE, and FHWA adopted the air quality conformity finding on (insert date). The project is also included in (insert MPO) financially constrained (insert year) Regional Transportation Improvement Program (RTIP) (include amendment number if applicable), pages #. The (insert MPO and year) Regional Transportation Improvement Program was found to conform by FHWA on (insert date). The design concept and scope of the proposed project is consistent with the project description in the (insert year) LRTP, the (insert year) RTIP and the assumptions in the (MPO's) regional emissions analysis.

Impacts

- List the applicable standard and attainment status of the area for each pollutant.
- If a project is located in a non-attainment or maintenance area for a given pollutant, then additional air quality analysis and reduction measures in regard to that pollutant is required. This "hot spot" analysis is most frequently done for CO and PM_{10}.
- Include a map showing the project alternatives and receptor sites used for any needed CO or PM_{10} hotspot analysis. Also, include the location of the air district monitoring stations used to establish background concentrations.
- For each "non-attainment" or "maintenance" pollutant, the environmental document must summarize the following information from the air quality technical report:
  - Describe the analysis process briefly.
  - State any assumptions made for the purposes of doing the analysis.
  - Provide results of the analysis and a comparison of the impacts and the proposed avoidance, minimization and/or mitigation measures for each alternative.
  - State conclusions regarding whether the project will cause any exceedances.

If construction impacts are being discussed under each resource heading instead of in a separate section, then temporary air quality impacts from construction activities need to be discussed here.

Avoidance, Minimization and/or Mitigation Measures

Describe mitigation measures and commitments to offset adverse impacts

Noise

Regulatory Setting, Studies and Coordination

Provide information on UDOT's noise abatement criterion and include a statement that it is consistent with Utah Code 72-6-111 & 112 and 23 CFR 772 - "Procedures for Abatement of Highway Traffic Noise and Construction Noise" as outlined in "Highway Traffic Noise Analysis and Abatement: Policy and Guidance" by FHWA, June 1995.

Provide a summary of the public involvement/balloting process.

Affected Environment

- Characteristics of Noise
- Sensitive Receptors
- Existing Noise Levels (at receptors during highest traffic noise hour)

Impacts

- Summarize findings of the noise technical report. Model future noise levels for each alternative and the no-build (use design year traffic that is at least 20 years from the end of construction).
- Summarize the results of the noise impact analysis in the Table below. A sample table is provided below:

Table 4 is an example of a table that may be used to summarize the noise impact analysis:

Table 4. Summary of Noise Impact Analysis

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Predicted Noise Level with Abatement (dBA)			Reasonable and Feasible
X-1	x	x	x	x	x	x	x
X-2	x	x	x	x	x	x	x
X-3	x	x	x	x	x	x	x
X-4	x	x	x	x	x	x	x
Note:							

- Determine if there is a substantial increase (10 dBA) in noise with the project and/or whether the noise approaches or exceeds the NAC
- If the answer is yes to either, then there is a noise impact.
- Map showing receptors and proposed wall/berm locations.

Avoidance, Minimization and/or Mitigation Measures

- Consider noise abatement (include barriers of different heights and types)
- Determine whether proposed abatement is reasonable and feasible, based on the determination; refer the reader to the summary of the public involvement/balloting process in the regulatory setting section of this section.

Geology, Soils, and Topography

Regulatory Setting, Studies and Coordination

Summarize the local city and county zoning regulations that relate to the proposed project. Coordinate with local municipalities to identify the regulations that apply.

Affected Environment

- Provide a description of the site geology, subsurface conditions and topography
- Discuss types of soil/rock, depth to bedrock, groundwater depth
- Identify potential geologic hazards

Impacts

- Describe project's susceptibility to erosion and geologic hazards
- Discuss exposure of workers to these hazards during construction as well as the traveling public once the project is completed
- Identify and discuss potential impacts to natural landmarks and landforms. Refer to the visual quality section as appropriate

Avoidance, Minimization and/or Mitigation Measures

- Discuss measures needed for geologic or topographic features as they relate to the structural integrity of the facility
- Discuss briefly and/or reference measures to reduce visual impacts to geologic or topographic features
- Reference BMPs related to erosion control identified in the Water Quality section of the document
- Discuss measures for seismic hazards

Floodplains

Regulatory Setting

Summarize the regulatory setting as is it relates to Executive Order 11988 (Floodplain Management) and 23 CFR 650 Subpart A . Include a discussion of the local jurisdictions ordinances. Studies and Coordination

Summarize any coordination with local, state and federal water resources and floodplain management agencies (especially the Federal Emergency Management Agency) because of encroachment on a regulatory floodway, increase in the base flood elevation and any subsequent actions such as the need for a floodplain map revision.

NOTE: Executive Order 11988 requires that when a floodplain risk assessment is prepared, the public must be given the opportunity for early review and comment. It also requires that the risk assessment be filed with the State Clearinghouse. A reference to encroachments on the base floodplain must be included in public notices and any encroachments must be identified at public hearings.

Affected Environment

- Describe the existing base 100-year floodplain
- Include Federal Emergency Management Agency (FEMA) maps, National Flood Insurance Program (NFIP) maps or other maps developed by the highway agency. If the NFIP maps do not exist, develop the needed maps so the floodplain can be identified.

Impacts

- If an increase in the base floodplain elevation is anticipated, a hydraulic computer model must be run to establish the amount of increase in order to determine the floodplain encroachment impacts.
- Described any impacts surface water flow and plans for stream crossings or drainage structures.
- Describe potential for significant interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route.
- Identify any significant risk (to life or property).
- Identify significant adverse impacts on natural and beneficial floodplain values

Avoidance, Minimization and/or Mitigation Measures

- Measures to minimize floodplain impacts (e.g., basins, changes to the number of drainage inlets) may be considered as part of the design of the

project and included in the proposed action section of the environmental document.

- Measures to avoid the floodplain (e.g., selection of alternate sites for improvements, elevated structures) may be discussed in the Alternatives section.

Only Practicable Alternative Finding

The following is an example of text for the Only Practicable Alternative Finding for the final EA, if applicable:

Example Text:

Based on studies carried out by the UDOT on behalf of the FHWA, no practicable alternative to the proposed alternative exists (23 CFR 650, Subpart A). All other potential alternatives are not possible within reasonable natural, social, and economic constraints. In addition, all measures to minimize potential harm within the floodplain, consistent with regulations issued in accord with Section 2(d) of Executive Order 11988 have been taken. Further, a public notice, as required by Executive Order 11988, has been circulated containing an explanation of why the action is proposed to be located in the floodplain.

Water Quality

Regulatory Setting, Studies and Coordination

Describe the regulatory setting under the Clean Water Act including Section 401 and 402. In addition describe the state regulatory authority related to the Utah Division of Water Quality and any permits required.

Describe coordination with the federal and state agencies as necessary including the Corps, the Division of Water Quality, Division of Water Resources, and the Division of Drinking Water.

Affected Environment

- Watersheds and receiving waters
- Water quality of surface conveyances
- Groundwater quality
- Groundwater rights
- Biochemical functions of wetlands

Impacts

- Describe contaminants evaluated (e.g., total suspended solids, nutrients [nitrogen/phosphorous], pesticides, metals, pathogens, litter, biochemical oxygen demand, and total dissolved solids).

- Identify Surface Water Impacts
- Identify Groundwater Impacts
- Groundwater Rights and Wells
- Biochemical functions of wetlands

Avoidance, Minimization and/or Mitigation Measures

- Describe Best Management Practices (BMPs) for Pollution Prevention, Treatment, Construction, and Maintenance
- Include treatment BMPs (biofiltration strips or swales, detention basins, infiltration basins, traction sand traps, dry weather flow diversion and/or gross solids removal devices) in the proposed action section of the environmental document.

Wild And Scenic Rivers

Regulatory Setting, Studies and Coordination

Provide a description of the regulatory setting as it relates to the National Wild and Scenic Rivers Act.

Affected Environment

Identify any river in the National Wild and Scenic Rivers System, any river being considered for designation, or any "suitable" river segments that occur in or adjacent to the project area that could be affected by the proposed project.

Impacts

Describe the potential adverse effects on natural, cultural and recreational values. Adverse effects include alteration of the free-flowing nature of the river, alteration of the setting, or deterioration of water quality.

Avoidance, Minimization and/or Mitigation Measures

Describe consultations with the managing agency on avoiding or mitigating impacts and include a description of the mitigation measures developed.

Wetlands

Regulatory Setting

Describe the regulatory setting as it relates to the Section 404 permit program under the Clean Water Act (33 U.S.C. 1344) and the Executive Order for the Protection of

Wetlands (E.O. 11990). Also summarize the state water quality standards regarding wetlands as regulated by the Utah Division of Water Quality and the Utah Water Quality Board.

Studies and Coordination

For projects involving wetlands or potential wetlands, coordination and consultation with the Corps with oversight by the Environmental Protections Agency (EPA) is required. A formal wetland delineation must take place to determine the presence or absence of jurisdictional wetlands. If jurisdictional wetlands are found to be present in a project study area, the Corps may require a more detailed wetland functional assessment to determine the quality of the delineated wetlands. UDOT is in the process of adopting a wetland functional assessment protocol to be used in all UDOT projects impacting wetlands. Consult this manual for more information regarding the functional assessment procedure.

Affected Environment

- Introduction
- Methodology
- Wetland Categories
- Upland Cover Type
- Wetland Functions
- Wetland Inventory
- Existing Wetland Concerns
- Agency Coordination

Impacts

- Identify direct impacts (provide this information in a table)
- Identify indirect impacts (provide this information in a table)
- Include maps or other drawings that show wetlands and how the project or alternatives would affect the wetlands
- Describe altered wetland functions
- Describe water quality impacts to wetlands

Tables 5 and 6 are examples that can be used to display direct and indirect impacts.

Table 5. Direct Impacts on Wetlands

Wetland Category	Wetland Cover Type	Area in Acres
X-1	x	x
X-2	x	x

Table 6. Indirect Impacts on Wetlands

Wetland Category	Wetland Cover Type	Area in Acres
X-1	x	x
X-2	x	x

Avoidance, Minimization and/or Mitigation Measures

Describe the measures taken where avoidance is not practical and wetlands are adversely affected:

- Avoidance of adverse effects on wetlands
- Minimization of effects on wetlands to the extent practicable
- Identify compensatory mitigation for those impacts on wetlands that are unavoidable by restoring, enhancing, and/or creating wetlands.
- Provide information on pre-construction surveys, purchase of conservation easements, purchase of credits from established mitigation banks, and mitigation occurring on-site.

Only Practicable Alternative Finding

For a "final" EA, include the following information under a separate "Only Practicable Finding" subheading if the preferred alternative will impact wetlands:

- A reference to E.O. 11990
- An explanation of why there are no practicable alternatives to the proposed action.

> *Example Text:*
>
> Executive Order 11990, Protection of Wetlands, directs federal agencies to avoid to the extent possible the long and short term adverse impacts associated with the modification or destruction of wetlands, and to avoid direct and indirect support of construction in wetlands unless there is no practical alternative to such construction and the proposed action includes all practical measures to minimize harm to the wetlands. In accordance with FHWA's Technical Advisory T6640.8A (Guidance for Preparing and Processing Environmental and 4(f) Documents), this section explains why there is no practical alternative to the proposed action and why the proposed action includes all practical measures to minimize harm to

wetlands.

The major emphasis of the alternatives formulation and screening phase for the *(insert project name)* project was wetland avoidance and impact minimization. All of the alignments would impact wetlands because wetlands cannot be avoided within the study area. The alternatives analyzed in this EA are the result of this alternative siting process and are considered to be the least damaging to wetlands. The results of this process are summarized in Chapter 2, *Alternatives*.

- An explanation about the inclusion of all practicable measures to minimize harm to wetlands
- A concluding statement as follows:

Example Text:

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.

Water Bodies And Wildlife

Regulatory Setting, Studies and Coordination

Summarize the State of Utah wildlife species of concern (Utah Administrative Rule R657-48) and State of Utah conservation agreement species. Cross-reference the regulatory section of the *Threatened and Endangered Species* section, if relevant.

Affected Environment

Provide a brief description of each of the following categories:

- Water Bodies
- Wildlife Habitat
- Wildlife Corridors
- Fish and Wildlife
- Flora and Fauna Habitat Support Function of Wetlands

Include a description of any WSC or conservation agreement species in the applicable topic above.

Impacts

Provide a brief description impacts for the following:

- Water Bodies

- Wildlife Habitat
- Wildlife Corridors
- Direct Impacts on Wildlife
- Indirect Impacts on Wildlife
- Flora and Fauna Habitat Support Function of Wetlands

Include a description of any WSC or conservation agreement species in the applicable topic above.

Avoidance, Minimization and/or Mitigation Measures

Describe efforts to incorporate design features that avoid/minimize impacts to water bodies and wildlife. Include the results of coordination with USFWS, UDWR and local agencies. Provide information on any mitigation measures required, and cross-reference them with the *Threatened and Endangered Species, Water Quality* and *Wetlands* sections to ensure consistency.

Threatened And Endangered Species

Regulatory Setting, Studies and Coordination

Provide a summary of the regulatory setting and agency coordination as it relates to the following:

- Endangered Species Act (16 USC 1531 et seq.) Federally Listed Species
- Migratory Bird Treaty Act (16 USC 703–711)
- Fish and Wildlife Conservation Act (16 USC 2901–2911)

Affected Environment

- Provide definitions of important ESA terms, such as “endangered”, “threatened” etc.
- Summarize consultation process with USFWS and status
- Special Status Species – Vegetation
- Special Status Species – Wildlife

Impacts

- Threatened or Endangered Vegetation
- Threatened or Endangered Wildlife
- Results of Biological Assessment/Evaluation and summary of consultation with USFWS.

Avoidance, Minimization and/or Mitigation Measures

Using a bullet list, identify compensatory mitigation or special conditions resulting from consultation with USFWS and UDWR. Include a statement on the results of the BO, if a "no effect" or "may effect" determination was made.

Invasive Species

Regulatory Setting, Studies and Coordination

Provide a summary of the regulatory setting, both federal and the Utah Noxious Weed Control Act/4-17-1. See example below.

Example Text:

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health."

The Utah Noxious Weed Act, Title 04 Chapter 17 of the Utah Code and Constitution requires each county to formulate and implement a countywide noxious weed control program designed to prevent and control noxious weeds within its county.

Affected Environment

Identify and quantify any existing invasive species within the project area. Note: Invasive species include wildlife as well as plants. Contact local county government officials to obtain a list of noxious weeds that should be included in this section of the EA.

Impacts

Discuss the potential of the project to promote or inhibit the spread of invasive species.

Avoidance, Minimization and/or Mitigation Measures

- Provide a statement indicating that invasive species will not be used in any landscaping needed for the project. See example below:

Example Text:

UDOT will specify on all construction contract documents that seed mixes used for landscaping and/or erosion control must be free of noxious weeds and other invasive plant species.

- Discuss measures that will be used to combat invasive species. Examples of measures include the following (see example text below):

Example Text:

In compliance with the Executive Order on Invasive Species, E.O. 13112, the Utah Noxious Weed Act, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

Historic And Archaeological Resources

Regulatory Setting, Studies and Coordination

Provide a description of the regulatory setting and coordination with the Utah State Historic Preservation Office (SHPO). Example text is provided below.

Example Text:

The National Historic Preservation Act (NHPA), as amended, sets forth national policy and procedures regarding "historic properties"—that is, districts, sites, buildings, structures and objects included in or eligible for the National Register of Historic Places (NRHP). Section 106 of NHPA requires federal agencies to consider the effects of their undertakings on such properties, following regulations issued by the Advisory Council on Historic Preservation (ACHP) (36 CFR 800).

Include a description of coordination with the Utah Geological Survey, if appropriate.

Historic properties and archaeological resources included on or eligible for listing on the NRHP should also be included in the Section 4(f) evaluation.

Affected Environment

- List studies completed for the project along with completion date
- Discuss methodology
- Describe Area of Potential Effects (APE)
- Identify any cultural resources, archaeological and paleontological resources within the APE and discuss the significance of each (i.e., whether it is on or eligible for listing on the NRHP. Include a discussion of the criteria under which the resource qualifies for listing on the NRHP.

Impacts

- Discuss the potential impact(s) of each alternative on each resource
- State for each resource the appropriate Section 106 determination of effect:
  - No historic properties affected,
  - No adverse effect, or
  - Adverse effect.
- Discuss consultation efforts with SHPO, and if applicable, the ACHP and any other consulting parties (e.g. Native American tribes)
- Discuss status of SHPO concurrence
- Include concurrence letters either in a separate appendix or in the Comments and Coordination section of the document.

Avoidance, Minimization and/or Mitigation Measures

- Discuss proposed avoidance, minimization and/or mitigation measures for each identified resource
- If the project would result in a finding of adverse effect, then a Memorandum of Agreement (MOA) will be needed before circulation of the final environmental document.
- Include a description of any stipulations in the executed MOA in this section and include the MOA as an appendix or in the Comment and Coordination section of the environmental document.
- For the Final EA, the SHPO concurrence letter or final MOA must be included in the Comments and Coordination section of the document.

If artifacts could potentially be unearthed during construction, consider including the following text from UDOT's Standard Specification Section 01355, Part 1.10, Discovery of Historical, Archaeological or Paleontological Objects.

Example Text:

Standard Specification Section 01355, Part 1.10, Discovery of Historical, Archaeological or Paleontological Objects

Standard Specification Section 01355, Part 1.10, Discovery of Historical, Archaeological or Paleontological Objects, will be enforced during this project. This specification stipulates procedures to be followed should any archaeological, historic, or paleontological resources be discovered during construction of the project. These procedures are as follows:

Immediately suspend construction operations in the vicinity of the discovery if a suspected historic, archeological or paleontological item, feature, prehistoric dwelling sites or artifacts of historic or archeological significance are encountered.

Notify the ENGINEER verbally of the nature and exact location of the findings.

The ENGINEER will contact the State archeological authorities who will determine

their disposition.

Protect the discovered objects and provide written confirmation of the discovery to the ENGINEER within 2 calendar days.

The ENGINEER will keep the CONTRACTOR informed concerning the status of the restriction.

The time necessary for the UDOT to handle the discovered item, feature, or site is variable and dependent on the nature and condition of the discovered item.

Expect a two (2) week or more delay in the vicinity of the discovery.

Written confirmation will be given by the ENGINEER when the restriction is terminated.

If a changed condition is approved, it will be controlled in accordance with Section 00725, paragraph: Differing Site Conditions.

Should a discovery occur, the FHWA will consult with the USHPO/THPO, and the Council in accordance with 36 CFR 800.13(b)(3) toward developing and implementing an appropriate treatment plan prior to resuming construction.

Hazardous Waste

Regulatory Setting, Studies and Coordination

Describe the regulatory setting for federal and state regulations, in addition to the following information:

- List applicable technical report(s) along with completion date(s).
- Describe the type and scope of site assessments and investigations conducted
- Discuss coordination or consultation with regulatory agencies, local entities or property owners
- Disclose any limitations with the site assessments or investigations
- State whether further investigation/monitoring is needed
- Provide justification for any postponement or dispensing of further investigations

Affected Environment

Summarize the findings of the site assessments or investigations for each alternative considered—number and locations of potentially contaminated sites, types of contaminants, levels of contamination and extent in relationship to the project.

Impacts

For each alternative, disclose known or suspected hazardous material contamination, and concentrations, that could be encountered during construction

Avoidance, Minimization and/or Mitigation Measures

- Discuss justification for avoiding or not avoiding known or suspected hazardous material contamination within the preferred alternative or corridor alignment.
- Include a rough estimate of the additional cost of avoiding, reducing, or mitigating hazardous waste impacts (both in dollars and time).
- Summarize efforts to avoid or minimize involvement with known or suspected hazardous material contamination sites during construction.
- State any required special considerations, contingencies or provisions to handle known or suspected hazardous material contamination during right-of-way negotiation and acquisition, property management, design, and/or construction.
- State any required further coordination, approvals, permits, and site closure with regulatory agencies.
- Provide justification for any postponement of coordination with regulatory agencies.

Visual Quality

Regulatory Setting, Studies and Coordination

Describe the regulatory setting as it relates to FHWA's visual impacts of highway projects and guidance materials. Provide a summary of the coordination that has occurred.

Affected Environment

- Summarize the methodology used
- Visual resources of Proposed Project as seen from off-site
- Visual Resources from the Study Area including any National Scenic Byways or other scenic roadway or viewshed designations
- Primary and sensitive viewer groups

Impacts

- Construction-Related Impacts
- Proposed Project Viewed from Off-Site
- Views from the Project

Avoidance, Minimization and/or Mitigation Measures

- Identify mitigation measures and commitments to offset adverse impacts
- Include a description of any CSS principles used in the project design

Energy

Regulatory Setting, Studies and Coordination

There are no specific energy regulatory requirements for the preparation of an EA for highway projects.

Affected Environment

Discuss the methodology used (BTUs consumed comparison among alternatives compared to No-Build) and any conservation opportunities available for the alternatives being considered. .

Impacts

Discuss why the project will cause no net increase in energy consumption, if applicable and why. If the project will cause an increase discuss the energy analysis.

Include a discussion of the following:

- Direct Impacts
- Construction-Related Impacts

Include a statement on whether there is consistency with any state or regional energy plan.

Avoidance, Minimization and/or Mitigation Measures

Identify mitigation measures and commitments to offset adverse impacts. These would include specifications to require contractors to maintain construction vehicles in good working condition, avoid idling vehicles unnecessarily and other construction BMPs.

Construction Impacts

If a separate section for construction impacts is necessary identify and assess the following:

- Construction phasing

- Construction schedule
- Construction work hours
- Construction noise
- Construction air quality (dust)
- Construction access issues (pedestrian and cyclists)
- Construction detours
- Emergency vehicle access
- Traffic delays
- Identify ways to minimize construction impacts
- Identify any avoidance, minimization and mitigation measures proposed.

Cumulative Effects

The CEQ handbook's 11-step process for analyzing cumulative impacts is listed below. This section should include the following for each resource evaluated in the EA. This section does not follow the typical outline used throughout the template and guidance document.

Scoping

Describe the scoping process for the proposed project:

Step 1. Identify the cumulative effects issues associated with the proposed action and define the assessment goals.

Step 2. Establish the geographic scope for the analysis.

Step 3. Establish the time frame for the analysis.

In this section describe the affected environment and environmental consequences for each resource evaluated in the EA, listing them in the same order as presented in the EA.

Describing the Affected Environment

Step 4. Identify other actions affecting the resource.

Step 5. Characterize the resources, ecosystems, and human communities identified during scoping in terms of their response to change and capacity to withstand stress.

Step 6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.

Step 7. Develop a baseline condition for the resources, ecosystems, and human communities.

Determining Environmental Consequences

Step 8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.

Step 9. Determine the magnitude and significance of cumulative effects.

Step 10. Modify or add alternatives to avoid, minimize, or mitigate cumulative effects.

Step 11. Monitor and evaluate the cumulative effects of the selected alternative and adapt management.

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Chapter 4
Section 4(f) Evaluation

When writing the Section 4(f) Evaluation, use the following organization for the Section 4(f) document:

Introduction

Description of Proposed Action

- Purpose and Need
- Alternatives

Section 4(f) Property

Use of Section 4(f) Property

- Direct Use
- Constructive Use (if applicable)
- Summary of Use of Section 4(f) Property by Alternative

Avoidance Alternatives for Section 4(f) Property

Measures to Minimize Harm to Section 4(f) Property

Coordination

Section 4(f) Determination (omit this section for draft versions, include for final evaluations only)

If the proposed project has multiple Section 4(f) properties, it may be easier for the reader if the document is organized so that all the discussion of a given property is in one location. In other words, describe the property, then discuss impacts to that property, then alternatives that would avoid that property, measures to minimize harm to that property, then coordination for that property and lastly the determination for each property. Do the same for each Section 4(f) resource. It is also helpful to include a summary table comparing various uses of each resource by alternative. Using this approach, the overall organization would look as follows:

Introduction

Description of Proposed Action

- Purpose and Need
- Alternatives

Section 4(f) Properties

1st Property [Insert name of 1st property]

- Use of [Insert name of 1st property]
  - Direct Use
  - Constructive Use (if applicable)
- Avoidance Alternatives for [Insert name of 1st property]
- Measures to Minimize Harm to [Insert name of 1st property]
- Coordination for [Insert name of 1st property]
- Section 4(f) Determination for [Insert name of 1st property]

2nd Property [Insert name of 2nd property]

- Use of [Insert name of 2nd property]
  - Direct Use
  - Constructive Use (if applicable)
- Avoidance Alternatives for [Insert name of 2nd property]
- Measures to Minimize Harm to [Insert name of 2nd property]
- Coordination for [Insert name of 2nd property]
- Section 4(f) Determination for [Insert name of 2nd property](include for final evaluations only)

Summary of Use of Section 4(f) Properties by Alternative

The following information describes what to include in a typical Section 4(f) Evaluation. Example text is provided that may be appropriate for use in most Section 4(f) documents.

Contents of the Section 4(f) Evaluation

Introduction

Include the following boilerplate language in the introduction:

Example Text:

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

1. There is no prudent and feasible alternative to using that land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

The uses as defined in 23 CFR 771.135(p), are described as follows:

1. Direct use occurs when:
   i. The property is permanently incorporated into a transportation facility,
   ii. There is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes as determined by the criteria in paragraph (p)(7) of this section; or
   iii. There is a constructive use of land.
2. Constructive use occurs when the transportation project does not incorporate land from a section 4(f) resource, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under section 4(f) are substantially impaired. Substantial impairment occurs when the protected activities, features or attributes of the resource are substantially diminished.

   Depending on the resource, a constructive use would involve permanent and severe noise, vibration, aesthetic, or access impacts. As outlined in 23 CFR 771.135 (p)(4), a constructive use of a protected resource occurs under any of the following situations.

   i. The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by section 4(f), such as hearing the performances at an outdoor amphitheater, sleeping in the sleeping area of a campground, enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site's significance, or enjoyment of an urban park where serenity and quiet are significant attributes. ii) The proximity of the proposed project substantially impairs the aesthetic features or attributes of a resource protected by section 4(f), where such features or attributes are considered important contributing elements to the value of the

resource.

iii. The project results in a restriction on access which substantially diminishes the utility of a significant publicly owned park, recreation area, or historic site.

iv. The vibration impact from operation of the project substantially impairs the use of a Section 4(f) resource, such as projected vibration levels from a rail transit project that are great enough to affect the structural integrity of a historic building or substantially diminish the utility of the building.

v. The ecological intrusion of the project substantially diminishes the value of wildlife habitat in a wildlife or waterfowl refuge adjacent to the project or substantially interferes with the access to a wildlife or waterfowl refuge, when such access is necessary for established wildlife migration or critical life processes.

Description Of Proposed Action

Provide a brief description of the proposed action.

Purpose and Need

Brief description of purpose and need (refer to Chapter 1 for detailed information).

Alternatives

Brief description of proposed project and alternatives, (refer the reader to Chapters 1 and 2 for detailed information).

Section 4(f) Property(ies)

For each Section 4(f) property describe and include the following information:

- Detailed map showing 4(f) resources within the study area and in relation to the project alternative(s).
- Size and location of property.
- Ownership and type of Section 4(f) property, e.g. County of XYZ Park
- Lease, easements, covenants, restrictions that affect ownership
- Function of or available activities on the property
- Description and location of all existing and planned facilities, a map or photos would be useful (baseball fields, playgrounds, etc.).
- Access (pedestrian, bicycle, car) to the property and usage (approx. # of visitors)
- Relationship to other similarly used lands in the vicinity (what other parks, recreation facilities or historic sites exist in the area?).

- Unusual characteristics of the property that either enhance or reduce its value.
- If the Section 4(f) property includes lands or facilities developed under Section 6(f) of the Land and Water Conservation Fund Act.

Use Of Section 4(f) Property(ies)

Clearly identify the use of each Section 4(f) property for each alternative:

Direct Use

Provide a description of the use required by each alternative of the resource. Include in the description the amount of land required, location of the land used, any function or facilities affected and if there are any changes in access to the property or to the activities. Maps or diagrams showing how the alternative affects the resource are useful. Describe the coordination with the agency having jurisdiction over the property and if there is proposed mitigation for the use of the land. If there is more than one project alternative, a table can be used to compare impacts by alternative, as shown in the example. Table 7 provides a sample that may be used to display the direct use acreages for a project with multiple alternatives.

Table 7. Direct Use of Recreation Resource X by Alternative

Alternative A	Alternative B	Alternative C	Alternative D
xx.x acres	xx.x acres	xx.x acres	xx.x acres

Constructive Use

Refer to the guidance document for more information. If proximity impacts are of concern and there is no direct use of the resource, provide a brief description of each category below:

- Noise
- Aesthetics
- Access
- Vibration
- Ecological Intrusion

Summary Of Use Of Section 4(f) Property(ies) By Alternative(s)

Table 8 is an example of a summary table that can be used to compare the use of each Section 4(f) resource by alternative.

Table 8. Summary of Use of Section 4(f) Properties by Alternative

Section 4(f) Property	Alternative A	Alternative B	Alternative C	Alternative D
Recreation Resource A	x	x	x	x
Historic Resource A	x	x	x	x
Wildlife Refuge A	x	x	x	x
Total Area 6(f) Use (if applicable)	x	x	x	x
Total Area 4(f) Use	x	x	x	x

Avoidance Alternatives for Section 4(F) Property(ies)

Provide a description and identify any alternatives that avoid the use of the each resource, including the No Build. Include any changes in alignment, right of way, design variations, etc, for each alternative. State whether or not there is a total avoidance alternative.

In the final EA evaluation, include a statement of whether or not the avoidance alternatives are feasible and prudent. Refer to the guidance document for more information on this topic.

Measures To Minimize Harm To Section 4(f) Property(ies)

Describe all measures developed to minimize the use of each resource, by each alternative. Include a description of any agreement for replacement land or other mitigation proposed. Refer to the EA as appropriate and include a discussion of the coordination that has occurred.

In the final EA evaluation, include a letter from the agency with jurisdiction over the resource concurring with the proposed measures.

Coordination

Document coordination with the agency having jurisdiction over the resource, the Department of the Interior (NOTE: they have 45 days to respond), and, as appropriate, the U.S. Department of Agriculture (for National Forest System Lands) and the Department of Housing and Urban Development (property for which HUD funding was used). Coordination with these agencies is the responsibility of FHWA and should occur before circulation of the draft environmental document and again, if needed, before the final environmental document. Coordination should center on:

- Significance of property
- Primary purpose of the land
- Proposed use and impacts
- Proposed measures to avoid and /or minimize harm

Section 4(f) Determination

Do not include a determination in the draft EA evaluation, only the final EA Section 4(f) evaluation should include a determination for each resource: The determination statement is specific and should read as shown below.

Specific Text:

"Based on the above considerations, there is no feasible and prudent alternative to the use of land from [name the Section 4(f) property(ies)] and the proposed action includes all possible planning to minimize harm to [name the Section 4(f) property(ies)] resulting from such use."

Include a determination statement for the Section 6(f) resource if applicable in the final EA, under a separate heading.

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Chapter 5
Mitigation Commitments

A list of environmental commitments (if any) should be developed and presented in this section of the EA. The list of commitments should consist of proposed mitigating measures, commitments made to resource agencies or other agencies with permitting authority, and any other environmental or design commitments that are to be included as part of project implementation.

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Chapter 6
Comments And Coordination

Provide a brief introduction to this chapter describing the contents.

Example Text:

"Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including: project development team meetings, interagency coordination meetings, (continue list as appropriate). This chapter summarizes the results of UDOT's efforts to fully identify, address and resolve project-related issues through early and continuing coordination."

- Discuss the scoping process (if formal scoping was done).
- Describe consultation and coordination with public agencies.
- Include official written correspondence among agencies.
- Discuss public participation opportunities.
- Include comments and responses to comments.

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Appendices

Appendices can include technical studies or reports, copies of correspondence-related to the project, graphics, or regulations. For example:

- Appendix A: Noise Technical Report
- Appendix B: Draft Memorandum of Agreement Regarding I-215 Widening Project